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ABSTRACT

To test the effects of prequestions and postquestions on word recognition and comprehension, two studies were conducted involving two groups of first through fifth grade students. An informal reading inventory using passages from Harper and Row's "Basic Reading Program" was administered and the results on the lowest instructional and frustrational levels were used as the measure of the subjects' performance on the post-questions task. For the prequestions task, additional passages at the students' instructional and frustrational levels were selected. Means were computed for percent of word recognition accuracy and percent of comprehension for each task at each level. Results for both groups indicated that there were no significant differences in word recognition or comprehension between the two tasks. The results are in line with those of other studies which have found that providing students with test questions bef e reading did not significantly aid or hinder their comprehension or word recognition. The studies indicate that more research in different comprehension tasks is needed. (FL)

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EFFECT OF PRE-QUESTIONS ON ORAL READING BY ELEMENTARY STUDENTS

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Alternatives to Literal Recall Tasks

A number of educators have criticized the emphasis they see on literal recall questions, in reading comprehension tasks. Guszak (1972) cited four studies which found that elementary teachers were asking a majority of such questions. Rickards noted that most of the research on effects of questions on comprehension involved "literal recall of specific facts." (1976, p. 602).

While educators, like Guszak, have called for attention to higher levels of comprehension, there has also been attention to what may be lower-level or easier tasks than literal recall questions. Whereas schemes of comprehension typically identify literal recall as the lowest level (Burmiester, 1974; Sanders, 1966), Guszak's sequence lists "locating" before "remembering." (Guszak, 1972). Lamberg and Kline (1977) broke literal level comprehension into three types of tasks, verification, location, and recall, and related all three to the "Knowledge Level" in Bloom's Taxonomy (Bloom, et al., 1956).

Location and Verification

A rough task-analysis of literal recall suggests that locating and verifying may be easier responses and may be considered sub-skills of literal recall tasks. In the recall task, much is demanded of the student. He must read the passage to "locate" information which may be important. Since he doesn't know what the questions are, he must read thoroughly rather than selectively; he must process much information and retain it long enough to answer the questions. He then must respond to the questions,

which, among other things, requires understanding of the questions themselves, not just of the text.

In a locating task, the student can search through the text to find the answer. The task may be given in a post-question (after reading); the student is allowed to look back at the passage. Kender and Rubenstein (1977) call this a "reinspection" task. The locating task may also be given in a pre-question (before reading); the student can read the text selectively to find the answer.

With a verification task, the student is given both the question and the answer, or a statement; he need only find the words in the text which verifies the answer or statement. At the literal level, the student need only match the words in the text with those in the statement or answer. Such a task can be presented before or after reading.

Both locating and verifying should be easier because they place less demand on memory. When presented as pre-questions, they should be easier still, because they allow the student to read selectively. There are, of course, many other factors which may affect the difficulty of the task: number, specificity, and cognitive level of the questions, familiarity with, and level of abstraction of, the content, and length and organization of the material. Helpful reviews of research on these and other factors are Anderson and Biddle (1975) and Frase (1975). Ability may also be an important factor, as will be discussed below.

It is important to note that the studies referred to above involved secondary and college students. Hansen (1977) reviewed five studies involving elementary children. (This review was found after the authors conducted their studies). Hansen noted that in studies by Farley (1972), Pettit (1970), Noakes (1969) and Goudley (1970), positive effects of "purpose setting" were not found, when students were provided in advance with a general purpose statement or specific questions. In only one study (Grant and Hall, 1967) a general purpose statement had a positive effect on average readers, no effect on above average, and adverse effects on below average.

A different approach was used by Kender and Rubenstein (1977) with elementary children. Their performance on two tasks was compared: (1) reading a passage and answering post-questions, (2) reading a passage of the same difficulty and answering post-questions but being allowed to reinspect (look back at) the passage. Comprehension was significantly higher on the second task.

The Studies

Two studies were conducted using the same procedures, hypotheses, and abillty levels of students. Performance by subjects was compared on questions presented after reading (post-questions) and questions presented before and after reading (pre-questions).

Null Hypotheses

There would be no significant difference (beyond .01) between performance on post-questions and pre-questions tasks, when scores were

compared for: (1) word recognition on instructional level passages, (2) word recognition on frustrational level; (3) comprehension on instructional level; and (4) comprehension on frustrational level.

Subjects

Subjects were elementary school students, who ranged in year in school from first to fifth grade. They ranged in reading level (i.e., highest instructional level) from pre-primer[1] to fourth[1]. Sixteen students were in Study 1; 18, in Study 2.

Procedures

An Informal Reading Inventory (IRI) was conducted, using criteria recommended by Guszak (1972), and passages from the Harper and Row Basic Reading Program (1966). Results from the IRI on the lowest instructional level and the frustrational level were used as the measure of subjects' performance on the post-questions task. For the pre-questions task, additional passages at the students' instructional and frustrational levels were selected. The Wheeler and Smith Readability Formula (1954) was used to insure these passages were at the same level as those in the IRI.

Analysis of Data

Means were computed for percent of word recognition accuracy and percent of comprehension for each task at each level. A t-test was used to determine significance, if any, of differences.

Results

There were no statistically significant differences in word recognition nor comprehension between the two tasks for the group in Study 1. Mean percentages were consistently, but only slightly, higher on the pre-questions task, as shown in Table 1. There were no significant differences in Study 2. Mean percentages were consistently but only slightly higher on the post-questions task, as shown in Table 2.

Discussion

The results of the two studies were in harmony with the results of four other studies involving elementary children; no significant differences were found in favor of pre-questions tasks. The procedure of providing students with test-questions before reading did not significantly aid nor hinder their comprehension or word recognition.

The positive findings in favor of pre-question tasks for secondary and college students but not elementary students suggest one or two factors which may be related: ability level and the nature of reading at that level. Elementary level readers who are in the process of mastering decoding skills may not be able to take advantage of pre-questions. They may not be able to attend to, nor even remember, the pre-questions. Put another way, the task of oral reading may mask the prior exposure to the questions.

Implications

More research on different comprehension tasks is needed, given the results of other studies and given the difficulties many students encounter with the traditional task of recall with post-questions.

Useful studies would be: (1) further investigation of general (rather than specific) purpose statements or questions; (2) replication of the Kinder and Rubenstein study (1977) of the "reinspection procedure"; (3) the effect of questions students ask themselves either before reading or following reading and before answering test questions; and (4) a comparison between oral and silent reading by the same subjects on different comprehension tasks.

Table 1

Mean Percentages of Accuracy for Post-Questions and Pre-Questions Tasks N=16

	Word Recognition		Comprehension	
	Post	Pre	Post	Pre
Frustrational	86%	88.2%	61.1%	67.4%
	(t = .38)		(t = .80)	
Instructional	94.8%	95.8%	88.0%	88.5%
	(t = .16)		(t = .48)	

Table 2

Mean Percentages of Accuracy for Post-Questions and Pre-Questions Tasks N=18

	Word Recognition		Comprehension	
	Post	Pre	Post	Pre
Frustrational	88.22	87.44 (t = 1.53)	66.66	58.88 (t = 1.25)
Instructional	96.17	95.44 (t = 1.64)	85.00	81.94 (t = .14)

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